

When should the majority rule? Experimental evidence for Madisonian judgments in five cultures

Introduction

Societies need to make collective decisions even when individuals disagree. In diverse settings from small groups to governments, people use multiple basic rules for collective choice including voting, consensus, leadership, and chance, along with many intricate elaborations of these rules. In political science, a broad literature on social choice theory studies the theoretical implications of different systems for collective choice across a wide variety of political problems and institutions (Arrow 1951; reviewed in Munger and Munger 2015). Much less is known, however, about how people *think* that groups should decide – which collective decisions rules are most appropriate for a given problem. We conducted an experiment with participants from five cultures to study how people’s preferences for majority-rule voting are affected when a vulnerable minority has more at stake in the outcome than the majority.

We suggest that people might have an *intuitive political theory* that governs how people think collective decisions should be made in particular situations. This idea draws on an interdisciplinary literature in cognitive science and social psychology that argues the human mind possesses a number of domain-specific cognitive abilities for understanding the natural and social world (reviewed in Carey and Gelman 2014). The human mind should have various psychological mechanisms for solving problems of collective choice that have commonly occurred in human evolutionary history. As with research on other intuitive theories, such as language, number, and physics, these mechanisms can be elucidated with experimentation (Carey and Gelman 2014).

In any preference aggregation problem, there is the potential for a minority group to form who has preferences that differ from the majority. A key insight from social choice theory is that majority-rule voting can harm efficiency when the aggregate costs to a minority group exceed the aggregate benefits to the majority group (Tullock 1959). This central problem was also expressed in James Madison's (1787) concerns about the "mischiefs of faction" and John Stuart Mill's (1869) warnings about a "tyranny of the majority". In contemporary societies, governments regularly have to address this problem in conflicts between majority and minority groups of citizens.

In the experiment presented here, we examine whether people have a "Madisonian" intuition about collective decisions involving a vulnerable minority.. Specifically, we test the narrow hypothesis that people will be less supportive of majority-rule voting when there is a vulnerable minority compared to when there is not. In this case, people will seek alternative decision rules that offer greater protection for minorities such as requiring consensus. Selecting a decision rule that protects minority interests can be beneficial to everyone because it avoids costly conflict from the minority group who is outraged by the perceived indifference from the majority to their plight.

Across cultures, there are strong recurrent themes underlying variation where rules like voting, consensus, and leadership with these rules appearing in various forms, elaborations, and combinations (Boehm 1999; Fiske 1992). Alternatively, there is wide variation across societies in which different rules are applied to making different kinds of collective choices, such as choosing a leader, appropriating government funds, or judging a defendant's guilt. In particular, majority-rule voting is tied to the ethos of some societies like the United States where even school children are taught about the normative goodness of voting. Conversely, many societies

around the world do not share the same vigor for voting and consequently, people in those societies may have much weaker preferences for voting.

Hence, in the present study we draw samples from five different countries (Denmark, Hungary, India, Russia and USA) to better understand people's judgments about voting. These countries vary considerably in terms of their political systems, economic development and ethnic composition. Given this diversity, we generally expect variation among countries in citizens' general support for voting. Our primary interest, however, is whether people from various cultures make Madisonian judgments against majority-rule voting when there is a vulnerable minority in the group.

Method¹

Participants

Participants were recruited on Amazon's Mechanical Turk (USA, India), on university campuses (Hungary), or by university lecturers in classrooms or via email (Denmark, Hungary, Russia). As planned in advance, we excluded participants who failed a simple comprehension question ($n = 126$; 14%), yielding a total sample of 823 participants and 2196 observations. Table A1 in the online appendix provides an overview of sample characteristics. As expected, all samples are relatively young and slightly left leaning (on a 1-7 scale). The majority of respondents in Russia were women, while in India and USA the majority were men. Overall, the samples provide considerable variation in national, political, and cultural contexts, even if each sample is obviously not representative of the respective nation as a whole.

Procedure

¹ All anonymized reproduction and replication materials are available at the paper's OSF repository at https://osf.io/4tp9b/?view_only=fbd7aa253f8b408399ec3ff5d041a6c6

Participants were invited to answer a survey administered on Qualtrics. After giving informed consent, they read the instructions. Participants learned that they will “read scenarios about groups of people who are trying to make decisions together ... [and] answer questions about how [they] think the group should make their decision”. Participants saw three scenarios in a random order.

In each scenario, a small group needs to make a collective decision even though they disagree. We designed the three scenarios to describe a few problems of social choice that could arise in everyday life—choosing a restaurant for dinner, choosing a location for a day trip, choosing how to divide the profits from selling a company. We purposely wrote the scenarios to be about small groups and non-politicized issues in order to specifically study participants’ intuitive judgments about social choice, holding aside for the moment their specific political beliefs (e.g. how to choose the nation’s leader) which could be shaped by many additional factors.

Importantly, in a between subject manner, we manipulated whether the group had a vulnerable minority—a smaller number of people who had more at stake than the majority. For example, participants in the vulnerable minority condition read the following description of the dinner scenario:

A group of ten people are deciding where to have a dinner event. Seven people want to have the event at a Japanese sushi restaurant. Three people cannot eat sushi because they have fish allergies and they want to have the event at an Italian restaurant instead. They have discussed this issue for a while but haven’t come to a conclusion. How should the group decide what to do?

In the control condition, participants read the same scenarios except they did not include information about a vulnerable minority or how many preferred each option. Appendix B details all experimental materials.

After each scenario, participants answered a forced-choice question by selecting which decision method they prefer – voting, consensus, leadership or chance. They also rated the appropriateness of each decision method on a 7-point scale (coded -3 to +3) from very inappropriate to very appropriate. Finally, participants provided some basic demographic information (age, sex, left-right ideology, partisan identity).

Design

The basic experimental design has two conditions where we manipulate the presence of a vulnerable minority between subjects. We repeat this design with three different scenarios to include multiple settings for group decisions. (We did not have specific predictions about differences based on the content of the scenarios.) Additionally, we collect data from five countries to investigate participants' Madisonian judgments in five different cultures. The Madisonian hypothesis makes the conditional prediction that across cultures, when participants favor voting in the control scenario, they will show less support for voting with the addition of a vulnerable minority. Our analysis, therefore, focuses on the effect of the vulnerable minority. We analyzed this effect using a series of simple comparisons as well as with hierarchical models that account for clustering.

Results

Figure 1 shows which decision method participants chose for each problem. Overall, across the different scenarios and countries, participants were less likely to choose voting when there was a

vulnerable minority, supporting the Madisonian hypothesis. In each case, the proportion of respondents who chose voting (black bars aligned left) goes down or stays about the same in the vulnerable minority condition relative to the control. Meanwhile, participants' preference for consensus (dark grey bars aligned right) goes up or stays about the same. Aggregating across scenarios and countries, the majority of respondents in the control condition (50%) chose voting as the best decision method, but only 24% did so when there was a vulnerable minority.

Conversely, only 27% of participants selected consensus as the best method in the control group, but the preference for consensus increased to 48% when there was a vulnerable minority, becoming the most popular option. Applying multilevel logistic regressions to estimate the probability of choosing vote and consensus respectively shows that the treatment effects are highly significant ($\beta_{\text{vote}} = -1.41$, $\beta_{\text{consensus}} = 1.21$, $p_s < 0.001$, see appendix C for model details). Looking at simple pairwise comparisons within each scenario and country, we find that the vulnerable minority caused a statistically significant change in the distribution of preferences in ten of the fifteen chi-square tests (see appendix C). In each case, the shift in preferences is from voting to consensus.

The appropriateness ratings (reported in detail in appendix D) add nuance to these insights by demonstrating that there are substantial differences between the mean appropriateness ratings of the experimental groups. In the control condition, participants from all five countries rated majority-rule voting to be the most appropriate for making each collective decision ($M_{\text{control}} = 1.50$). However, when the group included a vulnerable minority, participants rated voting as less appropriate ($M_{\text{minority}} = 0.11$, $p < 0.001$). Conversely, participants rated consensus to be more appropriate, by 10% of the full scale, when there was a vulnerable minority ($M_{\text{control}} = 0.66$,

$M_{\text{minority}} = 1.33, p < 0.001$). The shifts in the preferred decision method are not an artefact of the forced choice question format but reveal non-trivial treatment effects.

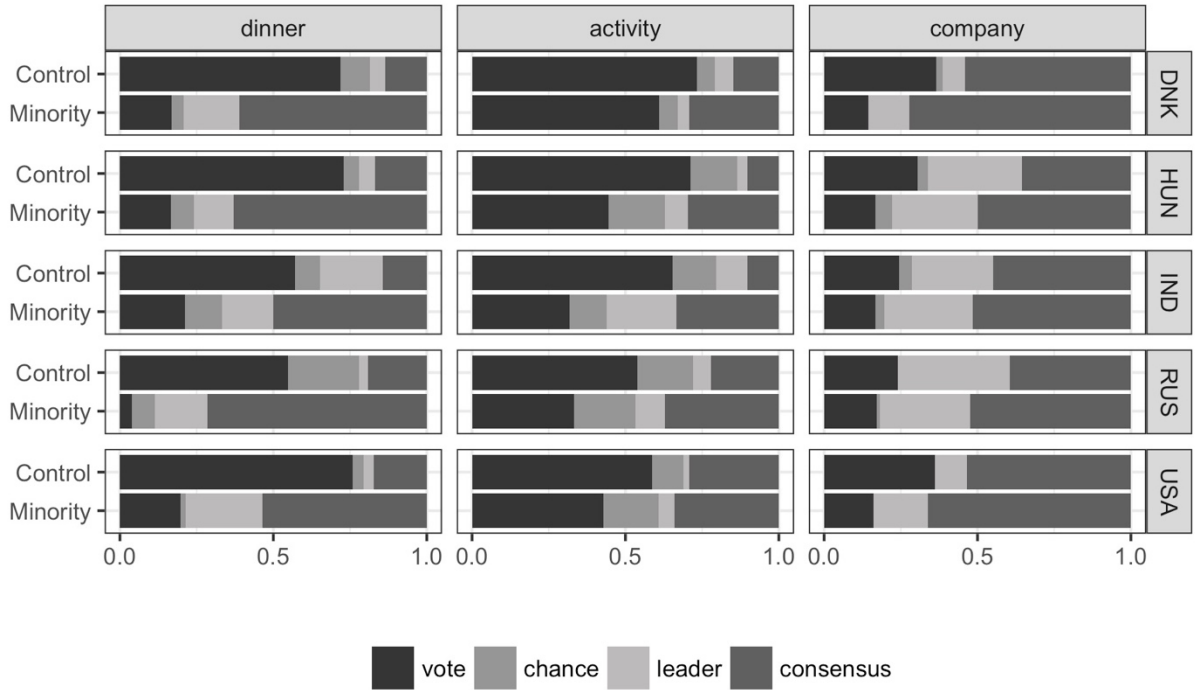


Figure 1. Participants' choice of decision method in each scenario and country. The results show an initially high preference for voting (black bars aligned left) in the control condition, which was substantially diminished when a vulnerable minority was present in the group. Meanwhile, participants' preference for consensus (darkest grey shade aligned right) tended to increase with the addition of a vulnerable minority.

Despite large cross-cultural differences in our samples, our results are remarkably consistent across countries. In each country, majority vote is the most popular decision method in the control group selected by over or close to half of the sample. Conversely, in the treatment group the majority or at least a large plurality prefers consensus (for a more detailed analysis see Appendix E). This consistency increases our confidence that human's intuitive political theory

builds on deep-seated psychological mechanisms shared by people living in remarkably difference circumstances.

Discussion

The results of this experiment support the Madisonian hypothesis that people's support for voting is diminished by the presence of a vulnerable minority. Indeed, it appears that vulnerable minorities increase the appropriateness of consensus. This is revealing because consensus was the only decision method out of the four options that is inherently protects minority interests. Moreover, this pattern occurred across all five cultures, even alongside variation in the absolute amount of support for voting in the control condition. This supports the theory that Madisonian judgments are part of people's intuitive political theory.

This study has a number of limitations that can be expanded upon in future research. For instance, participants did not have a personal stake in the conflicts. We suspect that when an individual's interests are at stake, this will add a strong motive to favor whichever method is most likely to achieve their goals. Future studies can examine how personal stakes, lifting the veil of ignorance, affects people's Madisonian judgements. Also, the current scenarios purposefully described situations which are political only in the broadest sense of the word. We regard this as a crucial initial step, which eliminates several important confounds, but future research should expand to address salient issues from national politics.

Subject to these limitations, we think the current findings may have implications for how people judge the legitimacy of voting as a rule for resolving societal disagreements (Boyer and Petersen 2012). The current results are congruent with previous works arguing that personal involvement increases legitimacy of decisions (Esaiasson, Gilljam, and Persson 2012). However, they also

add more nuance, demonstrating that depending on the circumstances, the specific form of involvement may make a difference. More specifically, citizens might view voting as illegitimate in cases when they believe (whether accurate or not) that a minority could be considerably harmed by the outcome of a vote.

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